

## **REMARKS**

### **The Rejection Under 35 USC § 112**

The claims are amended to overcome the rejections under 35 USC § 112, second paragraph.

### **The Rejection Under 35 USC § 103**

Claims 1-2 and 10-15 are rejected as allegedly unpatentable over Hiraiwa in view of Fujiwara.

Hiraiwa teaches a method for producing silica glass by a method called the “direct method.” See column 4, lines 51-60, especially line 55. This method as admitted by the Office Action does not teach a step corresponding to step d) of the claimed method. The Office Action also alleges that “there is no indication that it is a porous matrix of step c) which is created” in the reference’s process. The reference is clear that in this direct method the ignot is “simultaneously consolidated” with silica glass powder deposition to grow the ignot. See column 4, lines 56-60.

The Office Action alleges that Fujiwara teaches the same sort of process while pointing to figure 4. This allegation then leads to the allegation that what is taught on column 9, lines 1-7, and in example 2 are relevant to the claimed process and provide the motivation for the modifications of the process taught in Hiraiwa. Applicants disagree with the allegations in the previous sentence. Fujiwara teaches a first method for manufacturing silica glass by the method called the “direct method.” See columns 6, lines 42-60, especially line 44. This first method is achieved by the use of the apparatus illustrated in figure 4. See column 6, lines 61-62. Fujiwara then teaches a separate distinct second method from the direct method for manufacturing silica glass by the method called the “VAD of soot method.” See columns 8, line 38 to column 9, line 7, example 2, and especially column 8, line 44. Fujiwara teaches that “silica glass obtained by this [VAD of soot] method has oxygen-deficient defects ..., and an absorption band near 160 nm tends to form due to the defects.” See column 8, lines 63-67. This problem associated specifically with the VAD of soot method is solved by fluorine doping the glass where the “formation of absorption band near 160 nm due to the defects is suppressed.” See column 9, lines 5-7. Nothing in Fujiwara teaches or suggests that the same defects occur in the direct method and/or that the solution of this problem occurring specifically in the VAD of soot method is appropriate in the direct method for any purpose since no such defects in the first method are said or suggested to

occur. Nothing in Fujiwara (and also in Hiraiwa) teaches or suggests that steps of the two distinct methods, i.e., of the direct method and of the VAD of soot method, should be combined, interchanged, etc. Thus, the steps and solutions to problems in the VAD of soot method in Fujiwara are not relevant and not taught or suggested to be combinable with the steps of the direct method taught in either reference. Accordingly, the claims are not obvious over these references.

Claims 1-2 and 10-15 are rejected as allegedly unpatentable over Hiraiwa in view of Fujiwara and Yamagata.

Yamagata does not cure the deficiencies of Hiraiwa and Fujiwara discussed above, nor is such an allegation made. For the reasons discussed above, the combination of these references also does not render obvious the claimed invention.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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